From fuelwood production to carbon sink: Changing notions of commons in Nepal's community forestry

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Abstract:
This paper describes the shifting management priorities in community forestry and explores the challenges as local commons are gradually becoming global carbon pool. Taking Nepal's community forestry as a case, the paper demonstrates that climate change discourses is gradually influencing the forest management priorities from policy discourses to everyday practice. It is observed that the local forest management practice is feeling pressure to prioritise carbon sequestration. Based on the analysis of national policy process and bringing cases of community forest user groups the paper then explores the implications for group autonomy, internal equity and poverty in and around forest lands.

Keywords: community forestry, climate change, management priority, equity, livelihoods

Introduction

As the forest commons are increasingly subjected to provide environmental services the number of stakeholders concerned and their stake in forest management has significantly increased. The discourses of environmental services have influenced the management decisions so that forests are being managed to benefit people well beyond the local communities. A range of environmental services: biodiversity conservation, watershed conservation, maintenance of landscape beauty and carbon sequestration. These benefits attract distant users who now who claim their stake over the management of forests. This is particularly so when new income streams from forest management provides incentives for more powerful state or corporate actors or local elites to undermine local communities' access to forest or deny them a fair share of benefits (Seymour 2010).

Nepal's community forestry, a widely considered successful case of the commons, is increasingly experiencing a pressure to be climate change responsive (Ojha 2008). With the realisation of the role of forest management in reducing emission (Stern 2005), community forest management practices have been geared towards generating diverse environmental services including carbon sequestration. This paper explores the shift away from conventional forest products to the production of environmental services and examines the potential consequences on community rights over forest.

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The paper has three sections. First section describes the shifting management priorities in policies and practices. Second, how the local people are responding to these new discourses. Third, it explores the potential implications into forest management outcomes, particularly, the equity and livelihoods.

Changing discourses in Nepal's community forestry

The Nepalese government has shown its strong commitment to implement any multilateral environmental agreements to address climate change threats. In the context of UNFCCC, Nepal has remained active in different alliances including the least developed countries (LDCs)[4] and Mountain countries. The government of Nepal organized a rally in Copenhagen during the CoP 15 with 'Save the Himalaya' the slogan and organised the 'Everest Summiteers Marathon' in New York in September 2010 to draw attention of global community on the climate vulnerability of Nepal. In addition to its own genuine effort to address the climate catastrophe, high reliance on international aid can be identified as one of the drivers of active involvement in climate mitigation and adaptation. This is also evident by the fact that during the Copenhagen Conference the Nepalese Prime Minister made a plea for additional, predictable, adequate, and sustainable funding primarily from developed countries.

Box 1: Kalapatthar declaration of GON

Through the Sagarmatha Declaration, we would like to highlight our collective commitment on climate change and areas of mutual cooperation. ....
In course of preserving the mountain ecosystem, expand the currently preserved 20 percent area of Nepal to 25 percent in the country and consolidate the forest area to 40 percent. To explicate our commitment, declare Gaurishakar and Apinapa regions as conservation areas. Source: (GoN 2009, Declaration of Cabinet meeting in Kalapatthar meeting on 4 Dec, 2009).

Climate change has dominated Nepal's development and environmental priorities in general and the forest policy debate in particular (Ojha 2008). Nepal held its cabinet meeting at the Everest Base Camp weeks before the Copenhagen Climate Conference and made decisions to keep aside 40% of its territory as forest land (Box 1). The meeting also declared three new protected areas so that almost a quarter of landmass is under protected area system. Recently some new protected forests have been declared. All these moves indicate a shift towards protective forest regime. Given the government's expressed commitment to protect forest to mitigate climate change, these

[4] Nepal was elected as the Chair of the Least Developed Country group of 49 countries from the Ministerial Meeting of the Group in New York on 29 September 2009.

shifting forest policies can be seen to be directly influenced by the international discourses on climate change.

With the evolution of REDD scheme particularly after the COP 13, GON also sought to benefit from carbon financing and applied for the World Bank's Forest Carbon Partnership Facility (FCPF). After the approval of Nepal's Readiness Preparation Proposal (RPP), Nepal is now in the phase of implementing RPP, and is preparing for carbon financing for the period of post 2012. Besides, almost a dozen of non state agencies are implementing NORAD REDD pilot projects. Piloting is going on in methodological aspects of carbon assessment, benefit distribution mechanisms and technical aspects such as monitoring, reporting and verification (MRV).

With the international discourses of climate change, environmental service has gradually emerged as the major policy shift in Nepal's forest policy process. Review of two key policy documents – the Master Plan for the Forest Sector (HMG 1989) and 12th Three Year Plan (NPC, 2010) show a clear shift from focus on forest products to environmental services (Table 1). As the table shows, the focus during 1980s was mainly in supplying needed forest products the recent national plan identifies 'enhancing ecosystem services' as the key policy agenda in forest sector. Gradually, the emerging discourse became dominant in policy debate, topic of research and professional engagements[5].

Table 1 Changing priorities in objectives and strategies of forest management

Master Plan for the Forestry Sector, 1989	**12th Three Year Plan 2010-2012**
Objectives	
Satisfaction of basic needs through sustainable utilisation of the forest resources and participatory decision making; also aim at socio-economic growth; watershed conservation; and conservation of genetic resources	Contribute to the national economy by enhancing ecosystem services though scientific, inclusive and participatory forest management and PES
Strategies	
• Increased production of fuelwood, fodder and timber, reduced consumption; effective harvesting and distribution; improved pasture and livestock development; • Legal and institutional improvement; education and public education for conservation of nature/biodiversity • Decentralised policies with effective local	• Reduce the impacts of climate change through Environmental conservation; • Enhance the environmental services through forest management and develop benefit sharing mechanism for potential earning through carbon trading. • New financial resources will be generated from forest's contribution to carbon

[5] On 25th November 2010, the DNPWC organized an interaction with multi-stakeholders including Park Managers, local communities, Kathmandu Upatyaka Khanepani Limited (Kathmandu Valley Drinking Water Limited), Nepal Electricity Authority, Water Tariff Board, and research institutions where they concluded that Payment for environmental services could be a potential source of revenue for PAs. A similar meeting was organized by the MFSC few weeks back to explore the potentials for PES and to discuss the plan for developing a new PES policy and legal framework.

participation; livelihoods to the poor; • Increased role of private companies, support to industrial development	sequestration through mechanisms such as REDD, CDM and NAPA • Expected benefits: more resources will be generated through REDD and other mechanism that reward forests for their role in carbon sequestration

Initially, the watershed and biodiversity services were mainly meant for sustaining the local farming and conserving watershed and ensuring a healthy living. However, these days the notion of these services is used primarily in a market context so that these services can be sold in cash. Sale of drinking water to the city dwellers, water to hydropower companies or attracting tourists to visit the areas are being conceptualised as potential forms of PES. In the context of climate change mitigation, carbon financing is also understood as a form of PES. The general orientation of the new policies around environmental service is aimed at promoting environmental services for trading.

Payment for carbon sequestration has become the dominant PES discourse in CF in Nepal. When the MFSC began to engage with the World Bank's FCPF programme, it generated a huge expectation that Nepal would earn millions of dollars from selling *air*. Media propaganda around carbon financing influenced people's thinking on the role of forest. Consequently, the conventional value and meaning of forest changed as a carbon stock that is to be protected for exchange of payment. The changing value of forest got reinforced with the approval of Readiness Preparation Proposal (RPP) by the Bank.

The emerging discourses of environmental services, particularly the potential benefits from carbon financing seem to have significantly influence the forest management practice in community forestry. There are a couple of reasons. First, community forestry provides a good case that has not only successfully reduced deforestation but also has substantially improved forest condition particularly in the Hills. Second, it has well established network of community institutions across the country which can become the foundations for ensuring sustainable forest management at the local level. Consequently, many of the ongoing REDD projects on methodological issues, institutions arrangements, benefit sharing, and capacity building are focused on community forestry. It can be concluded that community forestry has become the locus of REDD preparation process in Nepal. Gradually, the REDD and other PES agenda is percolating into the local CF institutions through action research on carbon assessment[6]; capacity building of CF institutions, mass media, exposure to consultation workshops; government circulars, etc. The CFUGs have received signals that REDD is coming with great promises and that they must be prepared for this. This signal has actually triggered a huge shift in forest management priorities.

[6] The ICIMOD and NTNC carried out a study on Ghimire CFUG in Lalitpur, Ilam and Mustng. Similarly, Winrock is carrying out a study on ….. in western Terai. Also WWF is carrying out in … districts.

Environmental services and external stakes

With the discourses of environmental services, actors beyond the local communities have begun to claim their stake in forest management. Nepal is a unique example of this case where the large rivers originated in Himalayas irrigate major part of northern India and part of Bangladesh. Since the popularisation of theory of Himalayan Degradation, the problem of floods and siltation downstream has largely been associated with poor environmental management in Nepalese hills (Ive and Messril 1989). With the increasing climate variability and extreme weather conditions, upstream-downstream link of the Himalayan environmental degradation has once again come to attention.

The recent floods in Koshi that triggered Indian interests in protecting the Churia region of Nepal is a case in point. This has been further influenced by the increased awareness of the Madheshi political leaders, who now have made a strong case for conservation of Churia. This explains why the President suggested the GON to prioritise Churia conservation that now appears in the newly released budget as 'President Churia Conservation Programme'. Apart from these cross border issues, several such claims have arisen at domestic level too. The Kathmandu elites are keeping eyes on conservation of peripheral hills. Many municipalities are drawing their drinking water from nearby community forests (Ojha et al. 2009). It appears that through the environmental service discourse, external stakeholders are gaining legitimacy to claim their stake over local forest management.

The environmental service has a low excludability. It is hard to exclude outsiders from watershed benefits, natural scene or that of carbon sequestration. In addition, in most of the cases, the outsiders are traditionally using these services and therefore claim a stake on it. These claims become stronger especially when they offer some payment/compensation in the form of financial benefits. Moreover, the state agencies use the public good nature of these services as the justification for their greater role in regulating and even in managing the resource (Swallow et al. 2005). The higher level management claims to reduce the transaction costs by providing the scale of economy. This could be achieved by building national or sub-national standards and institutional arrangements. Unfortunately, these centralising tendencies in forest management for greater efficiency may effectively compromise the autonomy that the local CFUGs are enjoying. There is a saying in Nepali, *kehi pauna key gumaunu parcha (if you expect benefit, you most lose something).*

With the emergence of the discourses of climate change and environmental services, Nepal's community forestry is also coming into increased interface with external stakeholders – the state agencies and the market. This is particularly true with the CFUGs which are too small to meet the demand for scale in transaction of the environmental services. As the average size of CF is only 85ha, it is recognised that the accounting and transaction of environmental service, particularly that of carbon must be integrated into a relatively higher level. The need to engage at a higher level for carbon financing is acknowledge by the RPP, one of the government's key document on REDD.

> *A hybrid approach to REDD implementation is proposed, although the full details of this still need to be worked out through pilots and further consultations and studies. A hybrid of national and sub-national implementation approaches would allow strategic issues (i.e., policy, legal and tenure arrangements) to be addressed at the national level* (MoFSC 2010:48).

However, along with the perceived high economic value of forest, external conditionality upon local management are gradually legitimised, primarily through REDD. Now the government, donors and other external agencies have explicitly raised their concerns and interests over how local forest should be managed. Climate crisis has become yet another agenda that rationalises and legitimises outside claim over local forests. As stated by Sommerville et al. (2010) PES has legitimised surveillance and monitoring of local behaviour in resource management. Here, benefits from PES/carbon financing have some trade-of with local autonomy in resource management and use. Consequently, external scrutiny and surveillance has increased through different channels. The RPP (MoFSC 2010) provides a glimpse of how local forests are now under external scrutiny within a carbon financing framework.

The RPP has identified high dependency on forests leading to illegal and unsustainable harvesting practices among others as the key drivers of deforestation (Box A). The document largely projects local people as the major actors of deforestation albeit acknowledging their compulsion to do so. This in turn, may induce protective regime in forest governance often through strong enforcement that would further alienate forest dwellers from their resource base. The risk with protective regime is high in cases where there is weak or unclear tenure arrangement. This is particularly so when we move from forest goods to services. The tenure arrangement is relatively clear and secure in community forestry. The Forest Act 1993 states that

Box: 1 Drivers of deforestation
High dependency on forest and forest products (timber, firewood and other NTFPs), Illegal harvest of forest products, Unsustainable harvesting practices, Forest fire, Encroachment, Overgrazing, Infrastructure development, Resettlement, and Expansion of invasive species.
Source: MFSC 2010

> *"The District Forest Officer may handover any part of a National Forest to a Users' Group in the form of a Community Forest as Prescribed entitling to develop, conserve, use and manage the Forest and sell and distribute the Forest Products independently by fixing their prices according to Work Plan."* (HMG 1993: article 25)

The term 'Forest Products' is bit confusing as it does not clarify whether water originated from community forest, or the Carbon that is sequestered can be treated as normal forest product such as timber or NTFPs. This has been even more problematic as the government officials now claim that it is only above soil plant products that is

handed over to the communities. Legally all the forest land belongs to the state and therefore any under soil products [and possibly the services] belong to the state. Again the RPP indicates this confusion which reads:

> *As the concept of forest carbon is new to Nepal, no provision has yet been made under legislation for clarifying carbon ownership, and thus this remains unclear. Forest carbon exists both within plants and within the soil; thus ownership rights to forest carbon could prove hard to define in community forests where rights to ownership of the forest and the underlying land are separated (MoFSC 2010:48).*

However, the community groups and the rights activists argue that as forests are handed over to the communities based on the theoretical assumption that increased tenure security would provide incentive for protection and sustainable management, the carbon rights cannot be separated from the broader definition of forests. Since forest-carbon is a value addition of a tree, pursuant to the Forest Act 1993 the CFUGs are entitled to sell the forest carbon (Basnet 2008:79). The federation of community forest users (FECOFUN), claims that carbon rights should not be separated from the forest rights. They also demand that not only the rights to use and manage forest products but the ownership of forest lands should be transferred to the communities (per.com. with Ghanashyam).

The case from Patle CFUG

The Patle CFUG lies in Lamatar, southern part of the Kathmandu valley. Uncontrolled logging and frequent forest fires resulted serious deforestation during early 1990s that induced local communities to take urgent actions. They formed a user group, prepared an operational plan, applied for community forestry and began to protect it. The initial concern was to allow forest to regenerate so that the everyday forest product needs such as fuelwood and fodder could be supplied.

Since the user group took charge in late 1990s, the condition of the forest has improved (Paudel et al. 2008) In the meantime; the rural economy has also gradually changed. Because of its vicinity to Kathmandu, many of the local people are employed or are operating their own small business. The changing lifestyle of middle class in particular began resulted in decreased demand for forest products. The members of the better off strata, who often lead the user group, have given a different environmental value due to their low dependency on forest on one hand and increased exposure to climate change discourse on the other. Consequently, the forest management priorities have gradually changed since the early 1990s as evident from the Operational Plan of Patle CFUG (Figure 1).

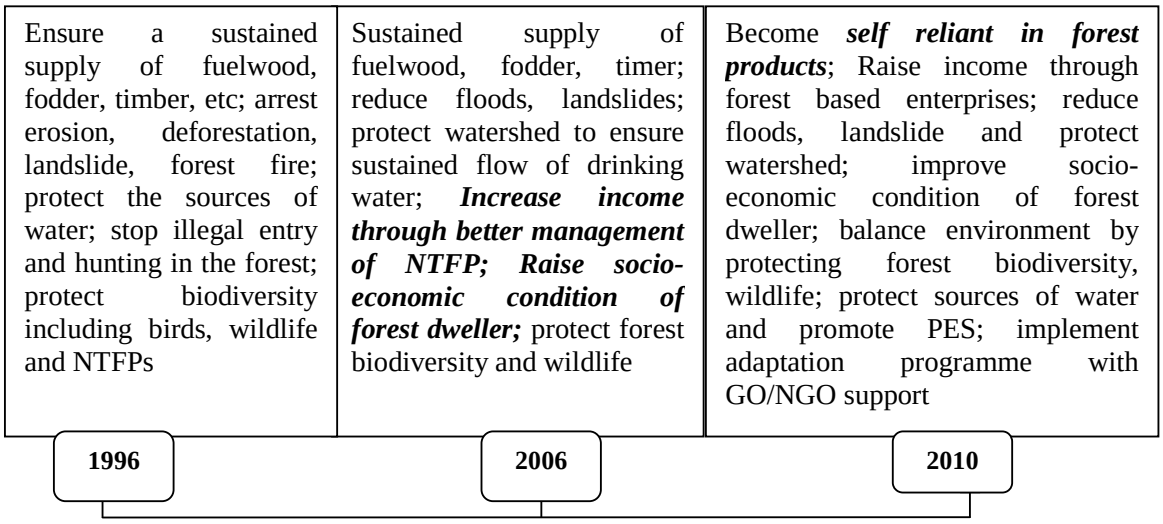

Figure 1 Comparison of three operational plans of Patle CFUG, Lalitpur Nepal

As evident from in the figure (Figure 1), some significant changes can be observed since the CF was initially managed in 1990s. For example, the latest OP has emphasised the environmental aspects. It aims at ensuring the environmental balance, a relatively abstract but comprehensive idea. Moreover, there are two specific provisions in the new OP: i) payment for environmental services (PES); ii) climate change adaptation. Apart from the objective conditions of Lamatar area itself, the national forest policy discourse has directly influenced the contents of the new OP in Lamatar.

We asked with the CFUG members why they were keen to these new provisions such as PES and carbon sequestration. 'We must follow the direction of the wind', replied one senior member. Here the 'wind' represents the national policy shift. 'We heard there is huge money in climate change, why don't we capture that fund?' added another member. The politicians and the professionals alike began to believe the story and promoted it. That has reached to the rural remote corners of the country. For sure, people of Patle, very close to the capital city must have frequently heard it.

However, when asked to one Dalit women, why did she support the particular idea in their OP; she replied, "Who are we to decide what to do? We just accepted what the leaders proposed." It is to be noted that the leaders of the group often rely less on forest for their everyday use and therefore often promote a protective agenda. As the poor and marginalise groups have weak voice in the group decision making, the OP passed through the assembly unopposed.

There is a natural water spring, in a privately owned land by the side of Patle CFUG. The landowner used to earn Rs. 1500/day by selling the water to a private company in Kathmandu, where scarcity of drinking water is a chronic problem. The local village development committee (VDC) also charged certain royalty from the water sale. Few years back, the CFUG began to argue that the spring is a product of the forest

conservation upstream and therefore, the not the landowner but the user group own the spring. After a long dispute, followed by a community meeting, the landowner had to give up claim over the spring. The community meeting decided that the spring belongs to the CFUG. Now the CFUG sell the water earning over Rs 0.3 million annually. The tenure over the water has now changed from a private property to a collective one. The dispute over water spring shows that once certain products are defined as environmental services, it induces a completely different set of claims and contestations often involving different sets of actors.

Discussion

The changing discourses dominated by climate change and forest policies that appear to move beyond the basic subsistence need is evident in the about accounts. Climate change has dominated the national policy debate on forest management in general and the community forestry in particular. The government, the bureaucrats, other actors working in forest sector including the civil society seems to be occupied by the REDD and related debate on climate mitigation. It is seen the climate change has replaced the earlier discourses such as sustained supply of fuelwood or biodiversity conservation.

The shift in policy discourses, particularly the purpose of forests is interesting. The Master Plan for the Forest Sector (HMG 1989) clearly laid down its focus on subsistence needs of forest products – fuelwood, fodder and other forest products. The whole purpose of introducing community forestry during the 1980s was to supply the subsistence needs of local communities. It was assumed that meeting local people's everyday forest products would ease their livelihoods as well as conserve forest. The whole purpose was in supplying the needed products. This has been largely reflected in the community forestry programme for long. Even today many of the forest officials openly argue that community forestry is for meeting the subsistence needs not for making money or profit. The same logic is used not to handover valuable sal forest in Terai or putting more restriction on timber harvest or timber trade, establishing any forest based enterprise.

However, the recent policy documents such as the forest sector approach paper, the RPP and REDD strategy all have moved beyond the everyday forest products use. Instead, these document emphasis in generating diverse types of environmental services including carbon sequestration. The PES and carbon trading therefore are seen as the main financial mechanisms that would put value on these environmental services of the forest, which they argue would help conserve forests. As seen above the national policy documents have already been translated into local level forest management plans such as the operational plans of the community forest user groups.

The beauty of CF is that it recognises the differential interaction between communities and resources and therefore allows all those different needs to satisfy. In subsistence focused management they manage the forest for fuelwood, fodder, broom grass, timber, leaves, leaf litter, grazing, etc. However, as the better off people with relative low reliance on forest dominate the CFUG decision, they often privilege environmental services, particularly the aesthetic value and the carbon sequestration. It is indicated by

the fact that many of the recently revised Ops have prioritised carbon sequestration as one of their forest management priorities. In practice, it implies changing the silvicultural operation towards maximising carbon stock. The potential consequences would be delegitimizing many of conventional practices and protecting bigger trees with larger biomass to capture more carbon.

The interview and group discussion on the issue reveals that many people, particularly the poor and marginalised people who traditionally rely on fuelwood collection and other conventional practice showed great concerns. They are worried for their traditional use may be restricted. The idea of managing forest for carbon is largely alien to them. They fear that external agenda that has already dominated the discourse may ultimately alienate them from their forest resource base.

A related issue is the benefit sharing mechanism. The CFUG members particularly the disadvantaged people are either little consulted or are excluded from current action research projects on exploring and piloting of appropriate good institutional models. These people also have little faith on the existing institutions either they be state or non state agencies. There are fears that any possible benefits may end up with the national agencies and the local elites. Given the historical experience of highly skewed and un-equitable distribution of development benefits, there are little hopes that the benefits from environmental services/carbon financing will reach to the poor and marginalised. Policies and institutions emerged from within the dominant discourse of climate change may simply favour the external agencies and the local elites.

The comparison of the three consecutive operational plans of Patle CFUG, shows that the national level policy discourses are gradually been translated into management plans. The earlier plans were heavily focused on the use of fuelwood and fodder so that the management and distribution of these basic products was central issue. However, with the changing national policy discourse, the local forest management agenda appear to have shifted to prioritise environmental services including carbon sequestration. Sustained flow of environmental services is regarded as the key forest management objectives in recent OPs. The major services are the watershed conservation, soil fertility, wildlife, greenery and more recently the Carbon.

Now when the management priorities are gradually geared towards carbon sequestration, the potential benefit would be the cash earned from carbon financing. In principle, the earning is a collective property and therefore is subject to equal distribution, whether rich or poor. This will effectively replace the equitable distribution arrangement that was possible within conventional management, e.g. ‘fuelwood case’. More importantly, there are potential risks of mismanagement, corruption and cheating. As the Patle case shows that cash earning from drinking water goes to the CFUG funds which is often spent either on administrative purpose or on community infrastructure.

Prioritising environmental services of forest management has attracted actors beyond the local communities. With the increased awareness of the link between global warming and forest, particularly mediated by the mass media, people living hundreds of

kilometres away from the forest area have begun to show their interests on forest management. The increased interest of distant actors including state, market, media and professional groups has become a burden to the forest dwellers. It appears that they have lost their autonomy on their own land without any external physical invasion.

It is difficult to exclude outsiders from the benefits of environmental services of forests; thereby reducing exclusivity- a very important element for successful collective action (Ostrom 1990). It contributes to diminish the incentive for conservation. Besides, global warming is not perceived as a threat equally by the members of local communities- another precursor of collective action (Ostrom 1990). Many of the do not necessarily share the scientific causality between deforestation and global warming. In other words, unlike scarcity of commonly used forest product, such as fuelwood, threats from carbon emission appears to be an alien for forest dwellers. This implies that there are serious threats to collective action in managing forest for environmental services.

Conclusion

The paper revealed how the discourses of climate change have shaped the forest management priorities. It is observed that the climate change agenda has gradually replaced the basic needs such as fuelwood and fodder. Instead, enhancing environmental services has become the major policy agenda in forest policy decision. The paper also demonstrated that the new policy priorities have gradually percolated deep into the local level forest management priorities and everyday practice of forest management.

The paper also revealed the potential consequences of such shift in management priority to the equity and livelihoods. It is learnt that moving from fuelwood to carbon oriented management has multiple and often negative impacts to the equity and livelihoods. The distribution arrangement has changed from traditional need based system to a universally accepted equality which in effect would undermine the differential dependency and interaction with the commons. In fact, the emerging priority has transformed the nature of the commons from a village commons to a globally significant commons governed not by local realities but by global priorities and principles. The second potential consequence of shifting towards is decreased incentive for collective action. The low excludability of environmental services and relatively complex causal relation between deforestation, carbon emission and its immediate impact on local community also reduces the incentive to take any urgent collective initiative to address the crisis.

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